

Application No. 10/531,844  
Amendment Dated October 2, 2006  
Reply to Office Action of April 7, 2006

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (currently amended) ~~A method of identifying inhibitors of an activator-independent MurD enzyme comprising The method of claim 9, further comprising~~ contacting the ~~enzyme test MurD enzyme determined to be an activator-independent MurD enzyme~~ with a test compound in the presence of ~~an enzyme substrates and appropriate buffers~~ and detecting any modulation of enzyme activity by the test compound, ~~wherein a decrease in activity indicates that the compound is an inhibitor of MurD.~~
2. (canceled)
3. (canceled)
4. (canceled)
5. (canceled)
6. (canceled)
7. (previously presented) The method of claim 1, wherein the enzyme substrates are UDP-MurNac-L-Ala, D-Glutamate and ATP.
8. (previously presented) The method of claim 1, wherein the enzyme is pre-incubated with the test compound before contacting it with the substrates.
9. (new) A method of determining if a MurD enzyme is an activator-independent MurD enzyme comprising:
  - aligning a test MurD enzyme with SEQ ID NO:2, and
  - identifying if the test MurD comprises one or more common amino acid residues with amino acids at position K96, C112, G116, T126, M129, L133, N296, S298 and I422 of SEQ ID

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NO:2, wherein the presence of one or more common amino acids in the test MurD indicates that the test MurD enzyme is an activator-independent MurD enzyme.